

ABSTRACT OF THE DISCLOSURE

An equalizer and equalization method as well as a receiver and reception method are provided which have little deterioration of the error rate characteristic even at a low oversampling rate in order to overcome the disadvantages of symbol synchronization and demodulation processing at a high oversampling rate, which is the problem of the QAM system. The equalizer equalizes a detection signal obtained by detecting a transmission signal with periodically inserted known symbol patterns made up of at least one symbol. The equalizer is constructed of a frame/symbol synchronization circuit 207 for reproducing symbol timing by detecting the symbol pattern based on the detection signal, an equalization processing section 203 for obtaining an equalization signal by multiplying signals extracted from the detection signal at predetermined intervals with weights, a pilot symbol pattern generator 205 for generating a reference signal which is equal to the symbol pattern, a subtracter 206 for acquiring an equalization error by subtracting the equalization signal from the reference signal and a weight control circuit 208 for updating weights based on the detection signal and equalization error at the timing of the symbol pattern.